Supersonic Combustion Ramjet

2214. SHRI RAVULA CHANDRA SEKAR REDDY: Will the PRIME MINISTER be pleased to state:

(a) whether the ISRO had designed and developed a Supersonic Combustion Ramjet;

(b) if so, the details thereof; and

(c) the present status of projects taken up by the ISRO?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) and (b) As part of advanced technology initiative in the area of Air-Breathing propulsion, a series of ground tests on a Supersonic Combustion Ramjet engine has been successfully completed. During these tests, a stable combustion has been achieved for nearly 7 seconds at supersonic speeds corresponding to an inlet Mach number of 6 (*i.e.*, six times the speed of sound).

(c) ISRO is currently carrying out further work related to design, development, analysis and realisation of integrated Supersonic Combustion Ramjet module.

Chandrayaan Project of ISRO

2215. SHRIMATI S. G. INDIRA: Will the PRIME MINISTER be pleased to state:

(a) whether it is fact that Chandrayaan Project of the ISRO has not just intended to land an Indian on the moon, but to exlore the vast mineral resources;

(b) if so, the details thereof;

(c) whether it is also a fact that the cost of putting material in space would have to be reduced for the project success; and

(d) if so, the steps taken in this regard?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) and (b) Yes, Sir, Chandrayaan-1 is not intended to land an Indian on moon and it is an unmanned instrumented spacecraft to orbit around moon. The objectives of this indigenous mission include high resolution imaging of lunar terrain and mapping of various chemicals and mineralogical constituents over its surface. In addition to the primary Indian payloads, through